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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,518	09/08/2000	Heiko Pintz	FRM-02601	5199

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EXAMINER

WACHTEL, ALEXIS A

ART UNIT PAPER NUMBER

1771

DATE MAILED: 09/12/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-8

Office Action Summary

Application No.

09/600,518

Applicant(s)

PINTZ, HEIKO

Examiner

Alexis Wachtel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

Detailed Action

Response to Amendment

1. Applicant's amendment and accompanying Remarks filed 6-6-2002 have been entered and carefully considered.

The amendment is sufficient to overcome the obviousness rejections of claims 1-8 and the 112 2nd paragraph rejections of claims 1-8. New claims 9-23 were added for consideration. However, an updated search yielded new prior art that provides a new basis of rejection as shown below. Applicant's arguments are rendered moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claim 1, Applicant does not clearly describe what is meant by the phrase: "wherein said weft and warp thread groups are connected together". How are the thread groups connected together?

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 9-13 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,020,275 to Stevenson et al in view of US 5,707,903 to Schottenfeld.

Stevenson et al discloses a composite open mesh structural textile. The textile is formed from at least two components. The first component is a multi-filament yarn. The second component is a polymer in yarn or other form which will encapsulate and bond yarns at junctions to strengthen junctions (Abstract). The structural textile is formed as an open mesh woven textile (Col 8, lines 30-33). The openings in the open mesh textile are typically from $\frac{3}{4}$ to 1 inch wide. The shape and size of the openings will depend on the performance requirements of the open mesh textiles (Col 9, lines 15-25) thus obviating the claimed mesh opening sizes. The structural textile is used in earth work construction applications (Col 1, lines 11-34). Stevenson et al discloses that it is known for open mesh woven or knitted structural textiles to be used in applications that rely on a frictional interface with construction fill materials to transfer structural loads to the load bearing element (Col 2, lines 61-63). The structural textile, in use, is disposed between two ground layers and prevents lateral movement of soil structures by said structural fabric's frictional interface with said two ground layers. Examiner notes that structural textiles of the sort described above function as frictional interfaces, and that their functioning as frictional interfaces is critical for their proper operation. It is also known for open mesh woven or knitted structural textiles to be coated with a material such as PVC after the woven or knit structure is formed. Said coating improves dimensional

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stability of the fibers/yarns in the junction zones to some extent and provides abrasion resistance (Col 3, lines 31-37). Other materials the coating can be made of include heat reactive acrylic copolymer latex (Col 11, lines 25-30).

Stevenson et al fails to teach that the composite open mesh structural textile is coated with foamed PVC rather than non-foamed PVC as disclosed. Schottenfeld teaches that foamed PVC is a high friction material that resists sliding across adjacent surfaces (Col 2, lines 58-60). A scrim is coated with the PVC foam by dipping the scrim in liquid PVC the scrim in an oven. While being cured, a chemical reaction causes gas to be entrained in the PVC. As the PVC solidifies, voids remain in the PVC to produce a soft, resilient, elastomeric foam material (Col 2, lines 29-34). In view of this teaching it would have been obvious for one of ordinary skill in the art at the time the invention was made to have foamed the PVC coating of Stevenson et al's structural textile motivated by the desire to improve its function as a frictional interface in earth works applications.

Regarding claim 5, it also would have been obvious for one of ordinary skill in the art to have used the coating process disclosed by Schottenfeld, that is, to dip the structural textile of Stevenson et al in liquid PVC then curing the PVC in an oven, whereby a chemical reaction is activated that renders the liquid PVC into a liquid foam. Absent evidence to the contrary, Examiner assumes the chemical used to foam the liquid PVC is a propellant. One of ordinary skill in the art would have been motivated by the desire make use of an effective coating process/coating curing process.

With regards to claim 4, although the limitations of PVC foam pore sizes are not explicitly taught by Stevenson et al and Schottenfeld, it is reasonable to presume that

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said limitations would be met by the teachings of Stevenson et al and Schottenfeld as set forth above. Support for said presumption is found in the use of similar materials (woven scrim coated with PVC foam) and in the similar production steps (i.e. coating woven scrim with PVC foam) used to produce the foam coated scrim. The burden is upon the Applicant to prove otherwise.

7. Claims 6-8, 14, 16 and 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,020,275 to Stevenson et al in view US 5,707,903 to Schottenfeld as set forth above in view of US 4,434,251 to Sasajima et al.

Stevenson et al and Schottenfeld as set forth above fail to teach that the PVC coating is formed by a polymer dispersion (emulsion) or made with a plasticizer or cured at a temperature over 100° C.

Sasajima et al is directed to PVC foam manufacturing methods and teaches that it is well known to use plasticizers in PVC foam production (Col 1, lines 60-68). Sasajima et al also teaches that it is known to make PVC foam via an emulsion polymerization method (Col 2, lines 15-25). Sasajima et al also discloses that PVC foaming is generally carried out at temperatures ranging from 170° C to 250° C or preferably from 170° C to 240° C. Examiner takes Official Notice that emulsions are frequently made with water and that the water is evaporated by heating the emulsion at a temperature that would facilitate water's evaporation. In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a plasticizer in liquid PVC to coat the woven scrim motivated by the desire to obtain a foam coated scrim that has greater flexibility. In addition, it would have been

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obvious to one of ordinary skill in the art at the time the invention was made to have made the PVC or polymer coating by an emulsion polymerization method motivated by the desire to use a known method for producing foamed PVC. It also would have been obvious to one of ordinary skill in the art at the time the invention was made to have cured the PVC foam at temperatures ranging from 170° C to 250° C or preferably from 170° C to 240° C since it is known in the art that such temperature ranges optimally cure PVC foam.

8. Claim 5, 7, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,020,275 to Stevenson et al in view of US 5,346,278 to Dehondt.

Stevenson as set forth above fails to teach that the acrylic copolymer latex can be foamed. Dehondt is directed to non-slip cushions and teaches that a scrim dipped in a foamed rubber polymeric material have a high coefficient of friction (Col 1, lines 52-58). Since Stevenson et al employs a rubber-like acrylic copolymer latex as a coating, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have foamed the acrylic copolymer latex of Stevenson et al motivated by the desire to improve Stevenson et al's structural textile's ability to function as a frictional interface in earth works applications. Examiner also assumes that the rubber-like latex acrylic dispersion is a dispersion. In addition, absent any disclosure relating to the foaming agent employed, Examiner takes Official Notice that the use of a high temperature activated chemical blowing agent is well known in the foaming art. Per claim 19, exemplary activating temperatures are known to be include Applicant's

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claimed temperature. One of ordinary skill in the art would have been motivated by the desire to make use of an effective and cost efficient foaming process.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Alex Wachtel, whose number is (703)-306-0320. The Examiner can normally be reached Mondays-Fridays from 10:30am to 6:30pm.

If attempts to reach the Examiner by telephone are unsuccessful and the matter is urgent, the Examiner's supervisor, Mr. Terrel Morris, can be reached at (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


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